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CPSU/UH Avian History Report 1

HISTORY OF ENDEMIC HAWAIIAN BIRDS
INTRODUCTION

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ABSTRACT

The history of endemic Hawaiian birds is developed in three major parts. Narrative accounts of 69 taxa, based on records since 1778, are detailed in Part I. Major ecological factors of population changes, such as depletion of food by foreign organisms, predation, disease, and habitat alteration, are treated in Part II. Chronological, geographical, and ecological elements of avian depopulation are synthesized and offered with conclusions in Part III. The Introduction states the objectives, lists the endemic avifauna, defines the historical scope, and outlines the complete work.

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ENDEMIC HAWAIIAN AVIFAUNA

The term "endemic" is used in this report to include only scientifically described species and subspecies known to have existed exclusively in the Hawaiian Islands during the historic period (since 1778). Such a definition eliminates all migratory and introduced birds and all but two species of sea birds leaving, according to the authorities consulted, the 69 taxa listed in Table 1.

It should be pointed out that the scientific classification and nomenclature of the endemic Hawaiian birds are presently in a state of disarray. The location of many type specimens is obscure (Banko, 1979 ms) and there is no visible recognition, let alone agreement, by various authorities as to who originally described many forms. The last comprehensive listing of original describers seems to be that of Bryan and Greenway (1944). Amadon (1950) provided the most commonly used taxonomic treatment of the Drepanididae. Berger (1972) is the most widely accepted general authority on Hawaiian birds.

In addition to the standard contemporary works, other recent contributions to knowledge were used or consulted. A new genus and species of honeycreeper was recently discovered on Maui (Casey and Jacobi 1974). Taxonomic studies by Greenway (1968), Richards and Bock (1973), Banks and Laybourne (1977), and Raikow (1977) are reminders that the classification and scientific nomenclature of the Drepanididae suggested by Amadon (1950) are not finally settled. I applaud all of these recent advances and agree philosophically with taxonomists in the expansion of generic limits beyond those conceived by Amadon. Additionally, Storrs L. Olson is studying many different kinds of fossil birds recently discovered in Hawai'i, while H. Douglas Pratt is working on systematic relationships of the historic avifauna. Because findings of some authorities do not yet allow final reconciliation, and others have not yet reported results of their work, I choose to follow the classification and scientific nomenclature of the Drepanididae given by Amadon and, with the following exceptions, that of Berger (1972) for the remaining taxa. I agree with Austin (1952) that subspecies of Oceanodroma castro do not merit recognition. For the Hawaiian rails I use Porzana as the generic name determined by Olson (1973) and follow Pratt's (1979) interpretation of rules by the International Commission on Zoological Nomenclature, as emended in 1974, for the following names in the genus Loxops (Drepanididae): L. parvus, L. maculatus maculatus, L. maculatus flammeus, L. maculatus montanus, L. maculatus ~~mana~~, L. coccineus coccineus, L. coccineus rufus, L. coccineus ochraceus. I also accept the AOU Committee on Classification and Nomenclature (1976) name for Hawaiian Stilt as Himantopus mexicanus knudseni.

The comprehensive list of Hawaiian birds recently compiled by Pyle (1977), and later emended (Anonymous 1977), offers the most generally acceptable single source of common English and Hawaiian names suitable for this report. I prefer to refer

commonly to Corvus tropicus as Hawaiian Raven rather than Hawaiian Crow as given by Pyle because of the ancestral relationship to C. corax apparent to Mayr and Short (1970). Because of long-standing tradition, I also choose to use the common name Hawaiian Dark-rumped Petrel for Pterodroma phaeopygia sandwichensis instead of Hawaiian Petrel chosen by Pyle.

For purposes which will be evident later, it is judged more appropriate to group the 69 exclusively Hawaiian taxa according to their characteristic environment, as shown in Table 1, rather than in the usual phylogenetic order. Only in Report No. 2. Specimens in Museum Collections do I treat species in the customary arrangement.

TABLE 1. Endemic Hawaiian avifauna grouped according to characteristic environment.

FAMILY AND SCIENTIFIC NAMES	VERNACULAR NAME	HAWAIIAN NAME
A. Sea Birds		
PROCELLARIIDAE SHEARWATERS, PETRELS		
1. Puffinus puffinus newelli (a subspecies of Manx Shearwater)	Newell Shearwater	'A'o
2. Pterodroma phaeopygia sandwichensis (a subspecies of Dark-rumped Petrol)	Hawaiian Dark-rumped Petrel	'Ua'u
B. Freshwater Birds		
ANATIDAE GEESE, DUCKS		
1. Anas wyvilliana	Hawaiian Duck	Koloa
RALLIDAE RAILS, GALLINULES, COOTS		
2. Gallinula chloropus sandvicensis (a subspecies of Common Gallinule)	Hawaiian Gallinule	'Alae-'ula
3. Fulica americana alai (a subspecies of American Coot)	Hawaiian Coot	'Alae-ke'oke'o
RECURVIROSTRIDAE STILTS		
1. Himantopus mexicanus knudseni (a subspecies of Black-necked Stilt)	Hawaiian Stilt	Ae'o

TABLE 1--Continued.

FAMILY AND SCIENTIFIC NAMES	VERNACULAR NAME	HAWAIIAN NAME
	C. Scrub-Grassland Birds	
ANATIDAE GEESE, DUCKS		
1. *Branta sandvicensis*	Hawaiian Goose	Nene
2. *Anas laysanensis*	Laysan Duck	
RALLIDAE RAILS, GALLINULES, COOTS		
3. *Porzana palmeri*	Laysan Rail	
4. *P. sandwichensis*	Hawaiian Rail	Moho
STRIGIDAE TYPICAL OWLS		
5. *Asio flammeus sandwichensis* (a subspecies of Short-eared Owl)	Hawaiian Owl	Pueo
SYLVIIDAE OLD WORLD WARBLERS		
6. *Acrocephalus familiaris familiaris*	Laysan Millerbird	
7. *A. f. kingi*	Nihoa Millerbird	
DREPANIDIDAE HAWAIIAN HONEYCREEPERS		
8. *Psittirostra cantans cantans*	Laysan Finch	
9. *P. c. ultima*	Nihoa Finch	
10. *Himatione sanguinea freethii*	Laysan Honeycreeper	

TABLE 1--Continued.

FAMILY AND SCIENTIFIC NAMES	VERNACULAR NAME	HAWAIIAN NAME
	D. Forest Birds	
ACCIPITRIDAE HAWKS		
1. Buteo solitarius	Hawaiian Hawk	'Io
CORVIDAE CROWS, RAVENS		
2. Corvus tropicus	Hawaiian Raven/Crow	'Alala
TURDIDAE THRUSHES		
3. Phaeornis obscurus myadestina	Kaua'i Thrush	Kama'o
4. P. o. oahuensis	O'ahu Thrush	'Amaui
5. P. o. rutha	Moloka'i Thrush	Oloma'o
6. P. o. lanaiensis	Lana'i Thrush	Oloma'o
7. P. o. obscurus	Hawai'i Thrush	'Oma'o
8. P. palmeri	Small Kaua'i Thrush	Puaiohi
MUSCICAPIDAE OLD WORLD FLYCATCHERS		
9. Chasiempis sandwichensis sclateri	Kaua'i 'Elepaio	'Elepaio
10. C. s. gayi	O'ahu 'Elepaio	'Elepaio
11. C. s. sandwichensis	Hawai'i 'Elepaio	'Elepaio
MELIPHAGIDAE HONEYEATERS		
12. Moho braccatus	Kaua'i 'O'o	'O'o'a'a
13. M. apicalis	O'ahu 'O'o	'O'o
14. M. bishopi	Moloka'i 'O'o	'O'o

TABLE 1--Continued.

FAMILY AND SCIENTIFIC NAMES	VERNACULAR NAME	HAWAIIAN NAME
HONEYEATERS (con't.)		
15. Moho nobilis	Hawai'i 'O'o	'O'O
16. Chaetoptila anqustipluma	Kioea	Kioea
DREPANIDIDAE HAWAIIAN HONEYCREEPERS		
PSITTIROSTRINAE (subfamily) GREEN AND YELLOW HONEYCREEPERS		
17. Loxops virens steineaeri	Kaua'i 'Amakihi	'Amakihi
18. L. v. chloris	O'ahu 'Amakihi	'Amakihi
19. L. v. wilsoni	Maui 'Amakihi	'Amakihi
20" L. v. virens	Hawai'i 'Amakihi	'Amakihi
21. L. parvus	'Anianiau (Lesser 'Amakihi)	'Anianiau
22. L. saqittirostris	Greater 'Amakihi	
23. L. maculata bairdi	Kaua'i Creeper	'Akikiki
24. L. maculatus maculatus	O'ahu Creeper	'Alauwahio
25. L. maculatus flammeus	Moloka'i Creeper	Kakawahie
26. L. maculatus montanus	Lana'i Creeper	'Alauwahio
27. L. maculata newtoni	Maui Creeper	'Alauwahio
28. L. maculatus mana	Hawai'i Creeper	
29. L. coccinea caeruleirostris	Kaua'i 'Akepa	'Akeke'e
30. L. coccineus rufus	O'ahu 'Akepa	'Akepeu'ie
31. L. coccineus ochraceus	Maui 'Akepa	'Akepeu'ie

TABLE 1--Continued.

FAMILY AND SCIENTIFIC NAMES	VERNACULAR NAME	HAWAIIAN NAME
GREEN AND **YELLOW** HONEYCREEPERS (con't.)		
32. Loxops coccineus coccineus	Hawai'i 'Akepa	'Akakane
33. Melamprosops phaeosoma	Po'ouli	*Po'ouli
34. Hemignathus procerus	Kaua'i 'Akialoa	'Akialoa
35. H. obscurus ellisianus	O'ahu 'Akialoa	'Akialoa
36. H. o. lanaiensis	Lana'i 'Akialoa	'Akialoa
37. H. o. obscurus	Hawai'i 'Akialoa	'Akialoa
38. H. lucidus hanapepe	Kaua'i Nuku-pu'u	Nuku-pu'u
39. H. l. lucidus	O'ahu Nuku-pu'u	Nuku-pu'u
40. H. l. affinus	Maui Nuku-pu'u	Nuku-pu'u
41. H. wilsoni	'Akiapola'au	'Akiapola'au
42. Pseudonestor xanthophyrys	Maui Parrotbill	
43. Psittirostra psittacea	'O'u	'O'u
44. P. bailleui	Palila	Palila
45. P. palmer-i	Greater Koa Finch	
46. P. flaviceps	Lesser Koa Finch	
47. P. kona	Grosbeak Finch	
DREPANIDINAE (subfamily) RED AND BLACK HONEYCREEPERS		
48. Himatione sanguinea	'Apapane	'Apapane

*Original Hawaiian name, if there **was** one, **is** unknown.

TABLE 1--Continued.

	FAMILY AND SCIENTIFIC NAMES	VERNACULAR NAME	HAWAIIAN NAME
	RED AND BLACK HONEYCREEPERS (con't.)		
49.	*Palmeria dolei*	Crested Honeycreeper	'Akohekohe
50.	*Ciridops anna*	'Ula-'ai-hawane	'Ula-'ai'hawane
51.	*Vestiaria coccinea*	'I'iwi	'I'iwi
52.	*Drepanis funera*	Black Mamo	'O'o-nuku-umu, noa
53.	*D. pacifica*	Mamo	Mamo

Historical Scope

First contact of Hawaiian birds with Western civilization began in 1778 with the observations and collection of specimens by naturalists who accompanied the third and last voyage of Captain James Cook. The history of the Hawaiian avifauna is divided into the following five periods, each typified by characteristic activities which are documented later.

1778–1841: Era of Discovery and Exploration (64 years): Collection and scientific description of 15 forms, 11 during Captain Cook's voyage; observational records few and brief; Hawaiian bird-catchers still active.

1842–1886: First Period of Complacency (45 years): Few specimens collected, only 14 new forms described; first check-lists appeared; almost no observational records; catching of Hawaiian birds for feathers declined.

1887–1904: Era of Scientific Collection and Description (17 years): Vigorous field and museum work by experienced scientists, naturalists, and collectors (S. B. Wilson, R. C. L. Perkins, L. W. Rothschild, G. C. Munro, H. C. Palmer, H. W. Henshaw); 36 new forms collected or described; three monographic works produced; feather hunting by Hawaiians ceased; the "golden age" of Hawaiian ornithology.

1905–1936: Second Period of Complacency (32 years): Few specimens collected; four new forms described; observational notes sparse (most produced by W. A. Bryan and G. C. Munro); first wildlife refuge established (Hawaiian Islands Bird Reservation, now Hawaiian Islands National Wildlife Refuge).

1937–1978: Era of Census and Research (41 years): Citizen birdwatchers organize and publish thousands of observational notes; six university theses on Hawaiian birds and one taxonomic monograph appear; 30 taxa officially recognized as being in danger of extinction by state and federal governments; conservation and research programs initiated; one new form described.

Outline of Complete Work

Documentation, correlation, and synthesis of information detailing changes in bird populations and environments in Hawai'i over the past 200 years necessarily complicates any comprehensive account. The subject is addressed holistically in three parts. Major topics and order of treatment are detailed in the following outline.

HISTORY OF ENDEMIC HAWAIIAN BIRDS

Part III. History, Ecology, and Conclusions

18. Introduction to Part III

19. Chronology and Geography of Depopulation (with range maps)

20. Evaluation of Ecological Factors (with range maps)

21. Synthesis and Final Conclusions

The National Park Service plans to distribute this and subsequent reports from their CPSU/UH project primarily for review and administrative purposes. Sections will be submitted for scientific publication later.

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